

## C L A I M S

1. An image pickup apparatus comprising:

5 a storage (21) for storing first image data and second image data obtained respectively in a first photographing operation and a second photographing operation;

a first direction-designating unit (26) for designating a direction for the first image data stored in the storage;

10 a second direction-designating unit (26) for designating a direction for the second image data stored in the storage;

15 a direction-comparing unit (224) for comparing the directions designated respectively for the first image data and the second image data by the first and the second direction-designating unit;

20 an image-angle correcting unit (225) for adjusting a tilt of either of the first and the second image data depending on a result of the comparison made by the direction-comparing unit so that the direction of the adjusted image data coincides with the direction of the other image data; and

25 an image composing unit (226) for combining the image data adjusted by the image-angle correcting unit and the other image data.

2. The image pickup apparatus according to claim 1, wherein information of the direction for the

first image data designated by the first direction-designating unit is associated with the first image data and stored in the storage, and information of the direction for the second image data designated by the  
5 second direction-designating unit is associated with the second image data and is stored in the storage.

3. The image pickup apparatus according to claim 1, further comprising:

an image designating unit (227) for designating  
10 either of the first image data and the second image data, wherein the image-angle correcting unit corrects the tilt of the image data designated by the image designating unit so that the direction of the designated image data coincides with that of the other  
15 image data.

4. The image pickup apparatus according to claim 1, wherein the image-angle correcting unit corrects the tilt of either of the first image data and the second image data by an arbitrary angle.

20 5. The image pickup apparatus according to claim 1, wherein the image composing unit combines the image data, the tilt of which is corrected with the other image data, and deletes a portion of the combined image data which runs out of a predetermined frame and  
25 fills in a portion of the combined image data missing from the frame.

6. The image pickup apparatus according to

claim 1, wherein the first and the second direction-designating unit comprise a touch panel and designate the direction using coordinates which represent positions on the touch panel where a user touches.

5           7. The image pickup apparatus according to claim 1, wherein the first and the second direction-designating unit comprise an angle sensor for detecting an angle and designate a direction based on the detected angle.

10           8. The image pickup apparatus according to claim 1, wherein the first and the second direction-designating unit comprise key buttons and designate a direction based on a direction of the depressed key button.

15           9. A photographing method comprising the steps of:

            a) storing in a storage first image data and second image data obtained respectively in a first photographing operation and a second photographing operation (A02, A04);

20              b) designating a direction for the first image data stored in the storage (A03);

            c) designating a direction for the second image data stored in the storage (A05);

25              d) comparing the directions designated respectively for the first image data and the second image data (A06, A07);

e) adjusting a tilt of either of the first image data and the second image data depending on a result of the comparison so that the direction of the adjusted image data coincides with the direction of the other image data (A08); and

f) combining the adjusted image data and the other image data (A09).

10. The photographing method according to claim 9, wherein information of the designated direction for the first image data is associated with the first image data and stored in the storage, and information of the designated direction for the second image data is associated with the second image data and is stored in the storage.

11. The photographing method according to claim 9, further comprising the step of:

g) designating either of the first image data and the second image data, wherein the tilt of the designated image data is corrected so that the direction of the designated image data coincides with that of the other image data (C08, C09).

12. The photographing method according to claim 9, wherein the tilt of either of the first image data and the second image data is corrected by an arbitrary angle.

13. The photographing method according to claim 9, wherein the image data whose tilt is corrected is

combined with the other image data, and a portion of the combined image data which runs out of a predetermined frame is deleted and a portion of the combined image data missing from the frame is filled in.

5           14. A storage medium recording a photographing method, which method comprises the steps of:

          a) storing in a storage first image data and second image data obtained respectively in a first photographing operation and a second photographing operation (A02, A04);

          b) designating a direction for the first image data stored in the storage (A03);

          c) designating a direction for the second image data stored in the storage (A05);

15           d) comparing the directions designated respectively for the first image data and the second image data (A06, A07);

          e) adjusting a tilt of either of the first image data and the second image data depending on a result of the comparison so that the direction of the image data to be adjusted coincides with the direction of the other image data (A08); and

20           f) combining the adjusted image data and the other image data (A09).

25           15. The storage medium recording the photographing method according to claim 14, in which method information of the designated direction for the first

image data is associated with the first image data and stored in the storage, and information of the designated direction for the second image data is associated with the second image data and is stored in the storage.

16. The storage medium recording the photographing method according to claim 14, which method further comprises the step of:

g) designating either of the first image data and the second image data, wherein the tilt of the designated image data is corrected so that the direction of the designated image data coincides with that of the other image data (C08, C09).

17. The storage medium recording the photographing method according to claim 14, in which method the tilt of either of the first image data and the second image data is corrected by an arbitrary angle.

18. The storage medium recording the photographing method according to claim 14, in which method the image data whose tilt is corrected is combined with the other image data, and a portion of the combined image data which runs out of a predetermined frame is deleted and a portion of the combined image data missing from the frame is filled in.